Claims

1. A particle filter (11), in particular for exhaust gases of internal combustion engines, including a housing (12) and a filter body (13) located inside the housing, in which the filter body (13) includes a plurality of filter walls (15), originating at a longitudinal axis (14) of the particle filter (11) and extending substantially in the radial direction and in the direction of the longitudinal axis (14), which walls are spaced apart from one another in the circumferential direction, and the filter walls (15) are welded or soldered at their face ends, at least in some regions, to at least one securing element (16), by way of which the filter body (13) is secured in the housing (12), characterized in that the securing element (16) has compensation means (17), which act between the securing element (16) and the housing (12) and compensate for motions of the filter walls (15) relative to the housing (12).

2. The particle filter (11) according to claim 1, characterized in that the compensation means (17) are an integral component of the securing element (16).

3. The particle filter (11) according to claim 2, characterized in that the securing element (16) has a radially outward-oriented outer flange (16a), at which the regions (16c) of the securing element (16) that are welded to the filter walls (15) are secured on their side facing away from the longitudinal axis (14) of the particle filter (11), and which flange is secured to the housing (12), and the compensation means (17) are located between the outer flange (16a) and the regions (16c) of the securing element (16) that are welded to the filter walls (15).

4. The particle filter (11) according to claim 2 or 3, characterized in that the securing element (16) has a radially outward-oriented outer flange (16a), at which the regions (16c) of the securing element (16) that are welded to the filter walls (15) are secured on their side facing away from the longitudinal axis (14) of the particle filter (11), and which flange is secured to the housing (12), and the compensation means (17) are located between a first region (16a1) of the outer flange (16), secured to the housing (12) of the particle filter (11), and a second region (16a2) of the outer flange (16), secured to the region (16c) of the securing element (16) that is welded to the filter walls (15).

5. The particle filter (11) according to one of claims 2 through 4, characterized in that the securing element (16) has a radially inward-oriented inner flange (16b), at which the regions (16c) of the securing element (16) that are welded to the filter walls (15) are secured on their side facing toward from the longitudinal axis (14) of the particle filter (11), and the compensation means (17) are located between the regions (16c) of the securing element (16) that are welded to the filter walls (15) and the inner flange (16b).

6. The particle filter (11) according to one of claims 3 through 5, characterized in that in the region of the compensation means (17), the securing element (16) has a web of material that is folded at least once.

7. The particle filter (11) according to claim 6, characterized in that the web of material has an areal extent essentially transverse to the motions of the securing element (16) that are to be compensated for.

8. The particle filter (11) according to claim 6 or 7, characterized in that the web of material is folded once or three times.

9. The particle filter (11) according to one of claims 6 through 8, characterized in that support means (19) are located in an intermediate region (18; 18a, 18b, 18c) between the folded web portions (17a, 17b; 17a through 17d) of the web of material.

10. The particle filter (11) according to claim 9, characterized in that the support means (19) include a corrugated support plate.

11. The particle filter (11) according to one of claims 6 through 10, characterized in that insulating means (20) are located in an intermediate region (18; 18a, 18b, 18c) between the folded web portions (17a, 17b; 17a through 17d) of the web of material.

12. The particle filter (11) according to claim 11, characterized in that the insulating means (20) include rock wool.

13. The particle filter (11) according to one of claims 6 through 12, characterized in that at least one inward-curved bead (21) is embodied at least in some regions in the circumferential direction on a radially inward-located folded web portion (17a) of the web of material.

14. The particle filter (11) according to one of claims 1 through 12, characterized in that the filter walls (15) include a sintered metal.